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EUROPEAN OPHTHALMIC INSTITUTIONS. No. V.

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Messrs. Editors,—As I spoke of Vienna as containing a galaxy of talent, so I may say, on the other hand, of Berlin, that it exhibits but a single star in the firmament of ophthalmological science. Professor von Graefe has, however, done so much, added so largely by his own observations to the revelations which we owe to the ophthalmoscope of Helmholtz, and made such valuable applications of these discoveries to practical use, that universal consent acknowledges him one of the stars of first magnitude.

The advantages offered at Berlin may be regarded as comprised within Graefe's "Klinik," which is a private institution for the reception of patients, comprising apartments for the accommodation of those able to pay larger or smaller sums, and rooms devoted to free beds. Patients are prescribed for every day, by himself or one of his assistants, and twice a week, in addition to a clinical lecture in the forenoon, at which interesting cases are exhibited, he has a consultation for out-patients, and performs operations, in the afternoon. His lectures are marked by clearness of demonstration, and are listened to with great attention by his class.

Most of the examinations requiring time, as those with the ophthalmoscope and those regarding the refractive or accommodative power of the eye, are made by one or other of his assistants; while he passes rapidly in review a large number of those suffering from acute or chronic forms of inflammation. Among these are numerous cases of catarrhal and phlyctenular conjunctivitis, and a very large proportion of the strumous forms of ulceration of the cornea in children. These latter are subjected to a prolonged forcible examination, but are otherwise mildly treated, on a similar plan to that pursued at the London Ophthalmic Hospital, where this disease is also one of the most frequent; local applications of atropia being combined with tonic general treatment. Numerous cases of ophthalmia of new-born infants also present themselves, which are

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treated by free applications of a crayon containing one, or two, thirds of nitrate of silver combined with nitrate of potash. After the cauterization, any excess of the remedy is neutralized by the use of a solution of chloride of sodium, followed by pure water. The same crayon is also applied in other forms of conjunctivitis, where the tumefaction is considerable and the secretion abundant. In other cases, of trachoma or chronic granulations, solutions of nitrate of silver are used, followed by salt and water and pure water.

I saw but one case of diphtheritic inflammation of the conjunctiva; but Prof. Graefe informed me that in the winter months it was extremely common and frightfully severe. Fortunately, this is not the fact, so far as I can learn, in other places on the continent, the disease being, as with us, of rare occurrence.

Another point in which Berlin exhibits a bad eminence, is the extreme frequency of glaucoma, which far surpasses the proportion observed in an equal number of patients elsewhere. We all know how much we are indebted to Prof. Graefe for the application of iridectomy to the treatment of this previously almost fatal disease, and it is to be hoped that as the affection comes to be better recognized, at its outset, by physicians, many cases may be saved, by a prompt recourse to surgical means as a remedy. Prof. Donders, of Utrecht, regards the disease as having its origin in irritation of the ciliary nerves, which has an influence in augmenting the secretion of the humors and increasing the intra-ocular pressure; and this, in its turn, tends to aggravate the primary pathological conditions, the morbid processes mutually re-acting upon each other. This theory explains the manner in which iridectomy may act in relieving the disease. There can be no question as to the certainty and safety with which the operation may be done, in all cases where the persistence of the abnormal pressure has not already induced destructive changes in the nervous structures; but it is important that the general constitution of the patient should receive attention, that a relapse may not supervene at a future period, from the action of the causes which have led to the first attack.

Whilst in Berlin I had the satisfaction of meeting Dr. Robertson, of Edinburgh, who has the honor of having introduced the Calabar bean into the ophthalmic materia medica, and of hearing from him an account of his experiments upon himself and upon animals. The application of the extract, or a solution containing the active properties of the bean, generally gives rise to a slight pain in or around the globe, and occasions very great contraction of the pupil, with myopia and loss of power of accommodation. In my own eye, the accommodative power was re-established in less than two hours after the effect of the bean had been produced, although the pupil continued small during twenty-four hours. Dr. Robertson had observed the same fact as to the duration of the effect upon the iris long after he had regained the ability to see objects clearly at ordinary distances.

The discovery of such an efficient agent, acting in an opposite sense to those remedies which dilate the pupil, will render most important services in enabling us to control mydriasis, and perhaps in various disorders of accommodative power. The importance of the discovery can be estimated by the attention which it is everywhere receiving from ophthalmologists, who are indicating their appreciation of its value in the warmest terms.

Utrecht, Holland, 23d July, 1863. Truly yours, H. W. W.

OBSERVATIONS ON STERILITY IN MAN; WITH CASES.

By T. B. CURLING, Esq., F.R.S., SURGEON TO THE LONDON HOSPITAL, &c.

THE object of this communication is to show that a want of aptitude to impregnate may co-exist with the capacity for sexual intercourse, or, in other words, that man is subject to *sterility* independently of *virility*.

The author states that sterility in man may arise from the following causes:—

1. Malposition of the testicles.
2. Obstructions in the excretory ducts of the testicles.
3. Impediments to the escape of the seminal fluid.

1. *Sterility from Malposition of the Testicles.*—The author remarks that the opinion of John Hunter “that when one or both testicles remain through life in the belly they are exceedingly imperfect, and probably incapable of performing their natural functions,” is corroborated in a remarkable manner by the facts adduced in this paper. After describing the condition of detained testicles, the author states that the question to be considered is, whether a testicle that has not passed into the scrotum can secrete a fertilizing fluid. He assumes, as quite established, that to possess this property the semen must contain zoöspersms.

Having referred to the observations of Professor Goubaux on horses, and to those of Follin and Godard on man, the author remarks that the proofs adduced by these observers were not sufficiently cogent and numerous to establish the law that cryptorchies are infertile; and it could not be expected that assent should be given to results so remarkable and unexpected without evidence of the most convincing character. Opposite opinions continue to be entertained, and have recently been avowed by Dr. Alfred Taylor.

The author gives the particulars of two cases of double detained testicle in married men (cryptorchies) without children; and also two cases of single detained testicle, the second testicle, in one case, being completely atrophied, and in the other having been removed by operation. In all four cases the copulative powers were satisfactory; but the ejaculated semen was destitute of spermatozoa.

The author gives a table, which includes these four cases and five others, three described by Godard, one by Puech, and one by the President of the Society, making nine in all, in which the fluid ejaculated by men with retained testicles was submitted to examination and found to be destitute of spermatozoa. In confirmation of the results obtained in these cases, he deduces some observations made upon the lower animals by Messrs. Goubaux, Follin, and Godard; and he furnishes a table of eight cases in which the fluid found after death in the substance of a retained testicle—in the epididymis or vas deferens, or in the vesicula seminalis on the side corresponding to the misplaced gland—had been examined and found destitute of spermatozoa. They have not been found after death in the spermatic ways of a detained testicle in any one instance that he knows of.

The facts which have been brought forward as opposed to the conclusion that cryptorchies are sterile, are chiefly instances in which they are reputed to have procreated children. Three cases are cited: one recorded by Mr. Poland, another communicated by Mr. Cock, and a third by Mr. Durham. The author feels no little hesitation in calling in question the claims to paternity in these cases; but remarks that as yet no case has been found in which a retained testicle has been fully proved to be capable of secreting a fertilizing fluid. The observations collected in the paper seem sufficient to show that, as a rule, they do not; and though he sees no valid reason why there should not be exceptions, still the evidence is wanting to establish the exception in either of the instances of reputed paternity which have been mentioned.

2. *Sterility from Obstructions in the Excretory Ducts of the Testicle.*—After giving a brief account of Gosselin's researches, in which he showed that after attacks of gonorrhoeal epididymitis the channel for the semen is temporarily and sometimes even permanently obstructed, causing, when the epididymitis is double, sterility, the author relates three cases occurring in his own practice of permanent obstruction in the epididymis of both testicles in married men whose wives were barren. In all three the patients had vigorous powers; but there was a total absence of spermatozoa in the ejaculated fluid. The author insists on the importance of careful and prolonged treatment in cases of epididymitis to obtain the removal of inflammatory effusions.

The author remarks that the passage of the semen from the testicle may be prevented by congenital absence of the vas deferens, which, if double, would occasion sterility. A case of the kind, in which the testicles were sound, had been observed by John Hunter.

The excretory duct of the testicle is liable also to be interrupted by tubercular deposits in the epididymis. It is well ascertained that this part is much more frequently the seat of tubercle than the

body of the gland, and is often extensively diseased, whilst the substance of the testicle remains sound. The author gives a case in point, in which the semen was destitute of spermatozoa.

3. *Sterility from Impediments to the Escape of the Seminal Fluid.*—It is well known that a close stricture of the urethra so completely interrupts the passage of the seminal fluid, that in ejaculation it regurgitates into the bladder, where it mixes with the urine. In erection of the penis, the urethra becomes narrowed, so that a stricture which offers but a slight obstacle to the flow of urine may under congestion be sufficient to impede the emission of semen. The author has grounds for concluding that sterility from chronic stricture in the urethra exists to a greater extent than is commonly supposed. As the condition is one which is in most cases remediable, it is only necessary to call attention to it as not an uncommon source of infertility.

The author alludes also to a case in which he had reason to conclude that sterility was consequent upon inflammation and abscesses near the prostate gland, occasioning obliteration of the ejaculatory canals.

Two important and delicate questions arise out of these inquiries. 1. Whether a man who has the inclination and power to copulate, but who is nevertheless sterile, is justified in contracting marriage. 2. Whether this condition is a sufficient ground for divorce.

That a man who is unable to fulfil the command, "to be fruitful and multiply," is right in disappointing the hopes and perilling the happiness and perhaps health of a woman, cannot, the author thinks, be maintained by any casuist, and in some of the cases related in the paper he has felt it his duty to give advice in accordance with this opinion.

It cannot be doubted that in women ready for conception, frequent sexual excitement without impregnation is very likely to prove injurious to health, and the author shows from the writings of Dr. West that diseases of the ovaries and uterus originate from this cause.

The second question is one upon which a surgeon is scarcely called upon to pronounce an opinion. But the author ventures to remark that as sterility in women is not considered an adequate cause for divorce, so the man ought not to pay such a penalty for unsuspected unfruitfulness.

The President then related several cases bearing on the paper. A gentleman, aged 34, had been married eight years to a healthy wife. He had strong sexual desire, and frequent intercourse, with abundant emission, but no family. He died of tumor in the groin, which was found after death to have been due to encephaloid disease of a retained testis. The other testis, which was also retained, was of the natural size, but did not contain any spermatozoa. Unfortu-

nately the disease had extended to the bladder, so that the condition of the vesiculæ seminales could not be made out. In a second case, not under his (the President's) observation, a gentleman whose testes were retained, and who had frequent intercourse with his wife, ejaculated a transparent fluid, but it did not contain spermatozoa. A gentleman, 34 years of age, whose testes were undescended, had frequent sexual intercourse and free emissions, but the fluid, which was examined four times, did not contain spermatozoa. This gentleman was desirous of knowing if he ought to get married. The President told him that if he did he would have no children. In a fourth case, one testis was misplaced in the perinaeum, the other was normal. He (the President) tried by an operation to bring it to its natural position, but did not succeed. He subsequently removed it. It did not contain any spermatozoa.

Dr. Webster said the subject discussed by the author of the paper just read was of much interest, and he believed with him that sterility oftener depended upon males than females. In support of such an opinion, he would refer to nearly 300 married men within his own acquaintance who, during their matrimonial state, never begot any offspring, excepting one instance, where a child was born after the mother had remained barren during fifteen years. In the list kept by Dr. Webster no person was entered until the parties had lived together for at least five years; and, although he never investigated the matter so scientifically as Mr. Curling, there appeared little doubt the fault mainly depended upon the male, since various females who continued childless throughout their first marriage, on contracting a second became mothers; whereas there only occurred, in reference to the opposite sex, the solitary example already mentioned. It might, however, be added as curious that a large proportion of the sterile individuals Dr. Webster had thus recorded were medical practitioners; and, moreover, what seemed also rather singular, seven of these couples lived in a thoroughfare having the same designation, but with different numbers on their respective residences. Regarding the chief cause of barrenness in the various illustrations to which Dr. Webster referred as coming under his immediate observation, none having been patients, it was impossible to speak definitively; nevertheless, as analogous cases are not uncommon, the inquiry mooted by Mr. Curling was important, both medically and in its social relations, besides bearing specially on questions of jurisprudence.

Mr. Wyatt asked if any of the gentlemen Dr. Webster spoke of had suffered from spermatorrhœa in youth.

Mr. Acton was pleased to think that the subject of sterility had been brought before the Society, thus proving that the affections of the reproductive organs were at length occupying that professional attention which their importance demanded; and he hoped that their treatment would never be again tacitly given up to quacks,

but pass into the legitimate domain of science. In the presence, then, of this professional neglect, it was not surprising to find so much public ignorance existing on the subject of the paper—a subject, it must admitted, still requiring much original investigation. He (Mr. Acton) was indisposed to allow that only three causes of sterility existed. The following was not of uncommon occurrence. A young entire horse, who has been a sure foal-getter, has, say, forty-five mares put to him; none of these mares become strutted (as it is called). Here was sterility on a large scale, and opened a wide field for inquiry as to whether the cause was obesity or sexual exhaustion from previous seasons' covering—causes which he had fully dwelt on elsewhere as commonly influencing sterility both in man and beast. It might, then, be consolatory for the medical husbands alluded to as having no family to know that the profession did not consider that they must necessarily suffer from undescended testes or epididymitis—the result of old gonorrhœas. After all his experience, he (Mr. Acton) was disposed to think that the childlessness of many women did not depend upon the fault of the husbands, but upon the fact that some of the canals appertaining to their own reproductive organs were blocked up either temporarily or permanently. Practically, it was found that too often the opinion of the profession was not asked by patients before marriage. The saddest cases met with in daily practice were those of previously strictly continent men, who married, and then learnt for the first time that they were incompetent to their marital duties; it was then that the medical man was first called in, and his opinion asked as to the cause of sterility. The answer was not such an easy one as had been assumed. The reason arose from many social causes, which could not be given on the present occasion. If it was truly stated that modern accoucheurs were of opinion "that frequent sexual excitement without impregnation was likely to prove injurious to healthy women," he must join issue with them. That the modern civilized lady was very subject to uterine or ovarian disease he would admit; but to attribute these ailments to such a cause as that above alluded to was not founded on observation, seeing that so many single young women were as great if not greater sufferers than the married, though sterile. He must likewise raise his voice against the assertion that epididymitis was a frequent cause of sterility, seeing the number of instances of young men who had been affected with this ailment who afterwards had a family. In treating of the causes of sterility, he would assert that the prognosis was not so unfavorable as had been stated. The Fellows of the Society must be aware of numberless instances of temporary sterility yielding to proper remedies, thus proving that the affection did not depend alone upon mechanical impediments to impregnation, but, like its kindred condition, impotence, was a frequently remediable affection.

Mr. Fergusson said he was disappointed that in a paper by a gentleman of so great experience as Mr. Curling, so little evidence could be brought forward on the subject. He then referred to malposition of the testes as a cause of impotency, but it had long been known that where the genital organs were imperfectly developed, the great probability would be that the sexual vigor would also be imperfect. He should like to have heard more evidence brought forward as to the condition of the ejaculatory tubes in cases of this kind. He (Mr. Fergusson) then went on to speak of the effect of inflammation of the ejaculatory tubes interfering with sexual power. He also alluded to the fact that sometimes, though rarely, they were injured in the operation of lithotomy, and related an instance in which a gentleman, seventy years of age, complained seriously of loss of sexual power after the operation; and another instance of the same defect in a younger patient. He said that although both testes might be affected by orchitis, generally only one was attacked, and the absence of one testis had very little to do with sexual vigor. In reference to Dr. Webster's statement, he said that he (Mr. Fergusson) knew a lady of most perfect development, who had had two children, and then became a widow. She then married a widower who had also had two children by his first wife, but this second marriage was not fruitful. Mr. Curling had also omitted to ascertain the exact time when the fluid examined had been emitted.

Mr. Curling had heard that the President was in possession of some facts bearing on the points in his paper, and had applied for this information some weeks ago, in order that his communication might be rendered more complete, and he regretted to state that the President was not disposed to assist his inquiries, and did not reply to his application. He had, however, included in a table one of the cases which had been mentioned, and which had already been communicated to the Pathological Society. With regard to Dr. Webster's remark, that sterility was more common in men than in women, he could express no opinion, for there were no data to enable him to form one. He had little to say in reply to the observations which had fallen from Mr. Fergusson and Mr. Acton. Mr. Fergusson had missed altogether the real point of the paper, which was on sterility, and not on impotency. Mr. Fergusson mentioned that we were well acquainted with the fact that persons with small, undescended testicles were impotent; but there was nothing new in that. But in the cases which he (Mr. Curling) had brought forward in his paper, the subjects of this infirmity were not impotent; they were only sterile. He had listened attentively to Mr. Fergusson's lengthened remarks, and could discover nothing which bore, in any way, on the paper, which had evidently not been understood by the speaker. He might also make the same remark in reference to the observations of Mr. Acton. He quite agreed that sterility after epididymitis was not common, because to produce

sterility the obstruction must exist on both sides. Mr. Acton doubted whether sexual excitement, without impregnation, produced any injurious influence on the health of the woman. Mr. Curling had the authority of Dr. Tyler Smith and Dr. Priestley, as well as of Dr. West, from whose work he had quoted, for saying that diseases of the ovaries and uterus originate from this cause. Mr. Curling had not laid claim to originality, but from a large experience he had been able to produce some important facts bearing upon a delicate subject, at present involved in obscurity, and respecting which it was extremely difficult to obtain reliable information.—*Proceedings of the Royal Med. and Chirurg. Society, June 23d, 1863, in the London Lancet.*

CLINICAL OBSERVATIONS ON THE EFFECTS OF DIET AND DRUGS
IN THE TREATMENT OF TWO CASES OF DIABETES MELLITUS,

CONDUCTED AT THE ROYAL INFIRMARY, EDINBURGH, UNDER DR. LAYCOCK, BY DR.
ANDREW SMART, CLINICAL CLERK.

THE two diabetic cases here referred to have been under observation for a period of six months, but the following results do not include more than ten weeks.

First series of observations were instituted with the object of determining the sugar-producing agency of certain articles of diet. They were conducted simultaneously on the two patients, both of whom, during the course of the researches, were placed in as nearly as possible similar conditions, and all sources of fallacy were carefully avoided. The substance to be tested was given to both patients in like amount at the same periods of the day; and the analyses of both urines were made repeatedly during the course of each trial. No trial was considered complete which was not confirmed in both cases; and the time allowed to conclude any observation was seldom under forty-eight hours, but it more generally extended over a period of several days.

In all cases, it was considered necessary, for the sake of accuracy, to note other characters of the urine besides its merely saccharine condition; and the amount of the urea with that of the sugar was in nearly every instance carefully determined. Besides these precautions, the amount of urine was accurately measured. The exact quantity of solid aliment (exclusive of its water) partaken by the patients was ascertained by weight—the proportion of water contained in the solid as well as fluid articles of food being previously estimated, deducted, and added to the fluid column. The total quantity of fluids taken was, in like manner, exactly ascertained. The weights of the alvine excretions were known, and the patients were weighed from time to time.

The following articles are arranged in the order in which they

were found to act as sugar-producers. The exact ratio of saccharine elimination produced by each has been ascertained and recorded, but general results only here are indicated.

1. *Sugar* (cane), whether used as an article of diet or medication, besides undergoing transformation into grape sugar, acted as a powerful diuretic and stimulant to the morbid production of sugar. It also greatly increased thirst.

2. *Rice*, contrary to general belief, was next to sugar in its influence on the production of diabetic sugar and increase of urine. Its action in these respects was much greater than can be explained by reference to the proportion of starch and sugar which it contains.

3. *Potatoes* were inferior to rice in their sugar and urine-producing powers, but exerted a markedly greater influence than the ordinary sorts of wheaten bread.

4. *Gluten Bread*.—We have not succeeded in ascertaining the exact composition of the bread usually sold under this name. It is decidedly sweet to the taste (but this saccharine quality does not depend on admixture with sugar). It is also very palatable, and preferred by diabetic patients to ordinary bread. It has been much recommended in diabetes, under the belief that, as an article of food, it operated more mildly in exciting and maintaining morbid action. This opinion was contra-indicated by repeated and careful trials, the results of which demonstrate that its influence as a sugar eliminator exceeds that of ordinary white and bran bread.

5. *White Bread*.—The trials with this bread, as with the others, were extremely varied, but invariably with like results. It undoubtedly produced less sugar than gluten bread, but was superior in that respect to brown bread and oat meal. It is interesting to know that the amount of sugar found in the urine invariably maintained a fixed relation to the combined proportions of sugar and starch contained in the bread, the proportion of diabetic sugar always exceeding that of the starch and sugar elements as two to one. Thus, for example, if the amount of bread taken in twenty-four hours contained, say 500 grains of combined sugar and starch, and no other substance interfered with the experiment, a careful analysis of the urine during the same period yielded, with remarkable uniformity, nearly double that amount, *i. e.*, somewhere about 1000 grains.

6. *Bran Bread*.—This bread differed in no important particular except in its milder action in the production of sugar. But this difference was trivial.

7. *Oatmeal*.—The influence of this cereal, when given weight for weight with the others, was so decidedly less that there can be no doubt in placing it last in the list now given. It diminished the amount of urine while rather heightening its density, but, as an article of diet, it was not relished by the patients.

8. *Eggs*.—When the patients were put on an exclusively egg

diet, the amount of urine and sugar progressively diminished, and the latter would probably have entirely disappeared from the urine had it been possible so to restrict the diet for a sufficiently lengthened period.

9. *New Milk*.—Contains sugar as sugar of milk; but, judging from all the trials which were made with it, we were led to infer that this constituent does not undergo glucose transformation. Under this, as in egg diet, the sugar progressively disappeared from the urine. But the great difficulty always experienced was, to confine the patients for some time to one or two kinds of food.

10. *Animal Diet*.—When eggs, milk, fish, beef, mutton, and all other kinds of animal diet, were given either alone or in combination, the following results invariably followed:—1. Marked decrease in the elimination of sugar and secretion of urine, which was progressive with the continuance of the diet. 2. Sense of hunger and thirst greatly lessened. 3. Increased density of urine.

11. *Vegetables*.—Such as cabbages and turnips, sensibly augmented the production of sugar, but to a much smaller amount than is generally supposed. They were also apt to derange the digestive system. Cabbage invariably produced diarrhoea in one of the patients, and in the other indigestion and flatus.

12. *Cod-liver Oil and Fats*.—Their use was followed by the same results as were found in the animal diet trials; but they could not be taken by the patients for some time, or in considerable quantity, without inducing nausea.

13. *Mixed Diet*.—The production of sugar under this diet, of whatever substances it may be composed, was found to be invariably proportional to the amount of sugar and starch contained in the articles which were used.*

II. *Second Series of Trials to determine the Influence of Remedies on the Elimination of Diabetic Sugar.*

1. *Permanganate of Potash*.—Allayed thirst, lowered the density, but increased the amount of the urine and also of the sugar.

2. *Sesquinitrate of Iron*.—Stimulated appetite for food; did not allay thirst; did not materially influence the amount of urine, but increased that of the sugar.

3. *Glycerine*.—Markedly increased thirst and the amount of urine; lowered density of urine, but total amount of sugar greatly increased.

4. *Chloroform*.—This was exhibited by inhalation, which was repeated every two hours during the experiment. Quantity of urine greatly increased; its density lowered, but total amount of sugar in twenty-four hours increased. Chloroform increases sugar simply by acting as a diuretic.

* *Porter and Ale*.—It is generally supposed that all malt liquors very powerfully stimulate to the morbid production of sugar in diabetes mellitus; but the experiments made with ale and porter do not support that opinion. Their use, to the extent of twelve or twenty-four ounces daily, is attended with little more than an appreciable increase in the amount of sugar. The rate of increase, as in the other articles, was ascertained and recorded.

5. *Sulphuric and Chloric Ethers*.—Both these agents operate as chloroform, but in a much less marked degree.

6. *Strychnia*.—The experiments with this powerful agent were begun by administering one-fortieth of a grain thrice daily, and the dose progressively increased until its physiological action on the nervous system became incipiently apparent.

The result was a progressive and commensurate decrease in the amount of urine and sugar. The patients' diet during the course of this and the other trials of remedies was uniform. The patients' general health was good, and they gained weight.—*Medical Times and Gazette*.

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

JULY 27th.—Dr. JACKSON reported by permission the following cases that had occurred in the practice of Dr. Benj. Cushing, of Dorchester; the dissections were made by Dr. J.

1. *Very extensive Arachnitis, connected with Disease of the Temporal Bone*.—The patient, a young man 19 years of age, of delicate health, had had otorrhœa upon the right side from his childhood until about five years before his death, when it ceased, on the occurrence of an abscess near the right temple. His fatal sickness lasted about four weeks. During the last fifteen days he was attended by Dr. C., and was confined to his bed, though during the previous week he had been out. Pains in the head and small of the back were throughout very severe, but without any marked affection of the special senses. An abscess formed behind the right ear, as one of the first symptoms—was opened, and healed. Soon afterwards, a second abscess formed, just above the first, which opened of itself, and never closed; a probe could be passed about extensively in various directions beneath the skin, and also within the substance of the bone to some extent. During the last week hemiplegia came on, upon the right side, and became complete: but, two days before death, an abscess was discovered upon the top of the head, was opened, discharged about two ounces of pus, and from that time he regained the power of motion: a most remarkable pathological fact, considering the state in which the membranes of the brain must have been. There was no discharge from the right ear, nor any more pain there than over the head generally. Deafness, of course, had been complete for years. The fever was moderate; pulse during the last two weeks about 100, and during the last few days it became more full. Once there was a general convulsion. One of the most striking facts in the case was, that the mind was perfectly sound until the last two days, when he had complete stupor. There was no appetite, but the irritability of the stomach that belongs to meningitis was wanting.

On dissection, the whole cerebral arachnoid was so thickly covered with a dead-opaque, and somewhat pasty lymph, that the convolutions were scarcely visible, except at the base, and about the cerebellum,

where there was but little effusion. It was evidently of considerable duration, as it could nowhere be scraped off entirely from the serous membrane. A most interesting anatomical fact was the limitation of the disease to the arachnoid membrane; the pia mater, where it dips down between the convolutions, showing nowhere a trace of lymph nor of serous effusion, nor was it even congested. The ventricles contained very little more than the usual amount of serum, and the brain was quite healthy. In the place of the internal ear was a cavity, four or five lines in diameter, filled with a rather firm, and probably old, curdy substance; and not far from this was a ragged opening, two lines in diameter, directly through the bone. The venous sinus adjoining the temporal bone was filled to some extent with old fibrin, and the whole top of the head was the seat of an abscess that burrowed between the scalp and the bone, and by which this last was extensively denuded. Organs of thorax and abdomen sufficiently healthy.

II. *Very extensive and latent Disease of the Aortal Valves.*—The patient was a gentleman, 57 years of age, who resided about three miles from the city, but came in daily, as he had a place in the Post Office. He was rather pale, but otherwise a healthy-looking man, and active in his habits. Neither his wife, nor his brother with whom he lived, knew anything of his having any cardiac symptoms, and Dr. J., who had often met him and conversed with him during the last two years, never suspected the disease. For about ten days before his death he had complained of feeling weak, and of some uneasiness about the epigastrium, but without any marked local symptom, and Dr. Cushing having questioned him in regard to dyspnœa and palpitation, he said that he had had none. He had been into town every day, so far as Dr. C. knew, to attend to his business, until last Friday, the 24th, and he expected to go in the next day. About 10, P.M., he went up to bed, when he soon complained of cough and dyspnœa, and in about ten minutes he died.

The disease of the valve was extensive in regard to the amount of ossification, the rigidity, and the narrowness of the passage for the blood. The parietes and cavities of the heart were but little affected; and the other organs generally were healthy.

Bibliographical Notices.

A Practical Treatise on the Diseases of the Heart and great Vessels, including the Principles of Physical Diagnosis. By WALTER HAYLE WALSH, M.D., Fellow of the Royal College of Physicians, &c. &c. A new American from the third revised and much enlarged London Edition. Philadelphia: Blanchard & Lea. Svo. Pp. 420.

THE standard work of Dr. Walshe on Diseases of the Heart is already too well known to require any extended notice at our hands. It would naturally be expected, embodying as it does, the results of accurate and careful observation by one of the most accomplished medical scholars of the time, that each succeeding edition would contain important additions and modifications, and we are not unprepared for the increase of valuable matter in the edition just published. Be-

sides numerous facts and discussions, more or less new, in the description of the principles of physical diagnosis, considerable additions have been made in the practical portions of the book, relating to affections of which little or no notice had been taken in the previous editions, including more particularly functional diseases of the heart. The chapters on this subject are peculiarly clear and instructive. The following original and philosophical views upon the nature of *angina pectoris*, are quoted from page 163. As will be seen, Dr. W. regards this painful affection as for the most part due rather to a paralytic condition, than, as many writers assume, to spasmodic action.

"For my own part, I regard the presence of spasm either initiative or sequential, either simple or with cramp, as altogether doubtful in the ordinary class of cases. In the first place, it appears to me incontestable that anginal suffering, and in a well developed form, may exist without spasm. For how is it possible that a heart spasmodically contracted can act rhythmically, as all good observers admit the organ habitually does where no *organic* disease, of necessity influencing the healthful measure of the pulse, co-exists? And if the seizure may thus be pushed to the imminence of death without spasm, it seems unlikely the mode of action should change just at the moment of the fatal syncope.

"I cannot help believing it most probable that the pain, when it gravely affects the motor innervation, does so paralytically; that the death is one of suspended, and not perversely excited, contraction. When the pulse does suffer change, its dominant condition is increasing weakness; besides, in the few cases I have opened, the heart bore no marks of recent spasm—it was flaccid and yielding. And, further, who ever meets with genuine angina in the possessor of a strong, purely hypertrophous heart?

"But while holding, on these grounds, very firmly to the doctrine of paralysis, as the perverted motor state in ordinary angina, I am not prepared to affirm there may not be exceptional cases, in which simple spasm, or spasm with dislocation, or rupture of fibre (true cramp), really occurs. I would suggest at least that in these rare instances, where intense tetanic spasm invades the external muscles, an analogous state of the heart may be the real cause of its stoppage; but I should not, even so, be disposed with Dr. Latham to look on the pain as the effect of the spasm, but to view the spasm as the reflex disordered motor result of the pain."

We would also invite particular attention to the chapter upon alterations of nutrition, and especially to that portion of it that treats of fatty metamorphosis of the heart as being worthy a careful perusal.

We have not space to enter into any enlarged analysis of the work before us. It will be sufficient to say that in the various and varied affections of which it treats, the author is always clear and concise, and no one can turn over its pages without receiving much sound practical instruction.

The volume is in the usual good taste of the publishers, to whom the profession is already so largely indebted.

A number of Surgeons and Assistant-Surgeons are required for the regiments of U. S. Colored Troops. The pay is the same as that of other regimental medical officers—Surgeons, \$163.00, and Assistant-Surgeons, \$112.83 per month. Application should be made to the Surgeon-General, U. S. A., at Washington, D. C., for permission to come before the Board of Examination. The general principles of examination are the same as those observed in the examination of Assistant-Surgeons of Volunteers.

 THE BOSTON MEDICAL AND SURGICAL JOURNAL.

 BOSTON: THURSDAY, SEPTEMBER 17, 1863.

PHARMACOPEIA OF THE UNITED STATES.—After a long delay the new Pharmacopœia has appeared. It was in May, 1860, that the National Convention was held at Washington for the purpose of preparing the fourth decennial revision of this work. The gentlemen then assembled, who represented the various State Medical Societies, the incorporated medical colleges, the colleges of physicians and surgeons and the colleges of pharmacy, appointed a committee of nine members to which was referred all communications, and which was authorized to take all measures that might be necessary for the revision and publication of the work. It consisted of the following gentlemen:—Dr. George B. Wood of Philadelphia, President of the Convention, Dr. Franklin Bache of Philadelphia, Dr. Edward R. Squibb of New York, Mr. Charles T. Carney of Boston, Dr. Henry T. Cummings of Portland, Mr. William Procter, Jr., of Philadelphia, Dr. Joseph Carson of Philadelphia, Mr. William S. Thompson of Baltimore, and Mr. Alfred B. Taylor of Philadelphia. During the three years which have passed since its appointment, the committee has held regular weekly meetings in Philadelphia, and has accomplished a large amount of labor in examining the materials which had collected during ten years, and in proving the many new processes which have been substituted for those recommended in the previous revision. A large part of this work was done by sub-committees, to whom special subjects for investigation were referred, and who made 138 written reports of their labors. The high character which one of the most active members of the committee bears as a successful pharmacist and manufacturing chemist should be a sufficient guaranty for the faithfulness with which this important work has been done. Dr. Squibb, in a report to the New York State Medical Society in February last, says, in relation to the impatient spirit which has been exhibited at the length of time required for its preparation:—"There has been much complaint from various quarters, of the delay, or the slowness which has attended this work, because few appear to have any adequate idea of the time, labor and responsibility involved in such an undertaking; and it is not encouraging to those who have now been earnestly, arduously and gratuitously engaged in it for nearly three years, to be requited by what they believe to be undeserved complaints and animadversions." He states, also, that he intends to offer at the next annual meeting of the Society "a concise practical review of the new Pharmacopœia, dwelling principally upon the character and uses of its new remedies, its nomenclature, and the changes introduced, and earnestly asking for its general adoption as an uniform rule of faith and practice throughout the profession."

It is not our purpose to attempt at this time a critical review of so important a work; we desire merely to call the attention of the profession to its publication, and to mention some of the modifications which have been made in the present edition.

To avoid all confusion, which is constantly arising from the use of the pound avoirdupois and troy, the committee has omitted the word "pound" throughout the book, and has in every instance expressed the desired weights by the term "troyounce," which cannot be mistaken for the ounce avoirdupois, and in grains. For the heavier, the oleaginous and the corrosive liquids the quantities are hereafter to be estimated by weight instead of by measure, a custom which is employed with nearly all liquids by the dispensing druggist upon the continent of Europe, and which should be borne in mind by those who copy foreign recipes. The process of percolation or displacement has been almost universally and most wisely substituted for that of maceration for the extraction of the soluble parts of drugs in the preparation of tinctures, extracts, &c. The list of the *Materia Medica* has suffered the usual changes of time. Twenty-six old members have been discarded, and fifty-five new medicines have been honored by an official recognition. As for the former we shall never miss them, while many of the latter have proved themselves, even upon a short acquaintance, of great value. The preparations have been increased by one hundred and eleven additions, while thirty-seven only have been omitted. Both numbers might, we think, have been increased with advantage, for there are very many foreign preparations which we might adopt greatly for our own benefit, and several which still retain their place in the *Pharmacopœia* are of no use whatever. A few changes have been made in nomenclature occasioned by the transposition of certain preparations from one class to another, and by the substitution of correct terminations in accordance with good Latin and advanced chemistry. Finally, a very important addition to the book, and one which we can all study with advantage, is a full index, so accentuated as to serve as a pronouncing vocabulary.

The work is published by Lippincott & Co., in large, clear type, upon good paper, and in order to bring it within the reach of every physician it has been issued at the low price of one dollar.

HOMO SUM, ET HUMANI NIHIL A ME ALIENUM PUTO.—The King of Dahomey certainly could not have been dreamed of by the philanthropist who gave us this beautiful sentiment, as the following letter in relation to the monster, lately written to the Duke of Wellington by M. Jules Gerard, the celebrated lion-hunter, will show:—

"Monsieur le Duc,—Your Grace is well aware that few men gain by being seen close, unless they are men of intellect and merit. The King of Dahomey, despite his cognomen, which signifies the 'Eternal,' or the 'Infinite,' fully justifies that rule, to which he is no exception. Physically he is similar to the other blacks of his country, tall, well built, with a head like a bull-dog. The most usual expression of his countenance is that of cunning and cruelty. His moral qualities are in perfect keeping with his physical conformation. He is more gracious than the kings who have preceded him, and fanatical for old traditions and customs. The traditions of that microscopic court are, to turn the whites to the best possible account, but especially to induce them to make presents. It is the custom to excite the people with sanguinary spectacles, so as to be able to carry off the neighboring population when a slave-dealer makes an offer to the King, and also at the annual custom of human sacrifices.

"I have just spent twenty days at Kana, where the King was staying for the celebration of the lesser ceremonies. On the day of my presentation I was conducted across the market-place, where twelve corpses were exposed to view on

separate sites. Six were hung up by the feet, the six others were upright, like men about to walk. Those whom I saw close were horribly mutilated, and not beheaded. An enormous pool of blood covered the ground beneath the scaffold, giving unmistakable evidence of previous sacrifices and of the tortures which accompanied them. Our reception by the King was brilliant, very cordial for myself as well as for the French Consul; but we were soon able to convince ourselves that this was but a comedy always performed by this poor Paladin to get the presents brought by the whites. Born and brought up in the midst of these spectacles, which would be ridiculous if they were not horrible, the present King is actually more fond of them than his subjects. I saw him on that day admiring, with the delight of a child, the grotesque dances and ridiculous pantomime of his Ministers, and then of the Princes, and then of all present, for our amusement. A most infernal music, which nearly deafened us, delighted the King, who seemed to be in a state of ecstasy; and this, M. le Duc, lasted for six hours. On the following day his Majesty invited us to witness a procession of the King's riches. On reaching the square of the palace (reed huts), an agreeable surprise had been prepared for us. The entrance-gate was flooded by a pool of blood, two yards in width, and on each side a column of recently decapitated heads formed two immense chaplets. It is true that on this day the King wore the emblem of Christ on his breast. It must be presumed that it was the cross of execution that he meant to imply by this ornament. As regards the procession of his wealth, it consisted of a few old carriages and bath chairs, carried by men with figures like Polichinello. One thousand women carried each a bottle of liquor on her head; a brass basin, in the shape of a foot-bath, to receive the blood of the human victims on the day of the King's banquet; an image of the Virgin; various baskets, full of human skulls; an image of St. Lawrence, as large as life, carried by blacks; finally, the drum of death.

"At another festival the King commanded on foot his Amazons, who manœuvred with the precision of a flock of sheep. On the market-place already mentioned each step was ornamented by a dead body; and the King came and went in the midst of pools of blood and fragments of human flesh in a state of putrefaction. On this occasion he had daubed his face with coal. The ceremony terminated by a mad dance, in which the King took part, dancing *vis-à-vis* to drunken soldiers and musicians. Such are, M. le Duc, the man, the government, and the people whom we have hitherto hoped to turn into a path less contrary to the laws of humanity. I regret that Captain Burton should have arrived at Kana just at the moment of the King's departure, as he might have been enabled to see and judge of all these things.

"On the day of his departure the King invited us to a review of his army prepared for war. It was from 12,000 to 14,000 strong, comprising 12,000 Amazons, 1,000 men of the body-guard, and 2,000 archers. I am, &c., JULES GERARD."

ARTIFICIAL EYES.—The history of artificial eyes brings us back to an epoch long anterior to the Christian era. In proof of this we have the painted pieces which are seen placed between the eyelids of a great number of Egyptian mummies. In our museums of antiquities are also to be seen some statues with silver, and others with gold enamelled eyes. In spite of its antiquity, the art of making artificial eyes has made but slow progress, since we still find that in the sixteenth century prothesis was only applied to maintaining, in front of the closed eyelids, a metallic plate on which was painted an eye surrounded by its membranous veils. These plates were fastened on by a string which surrounded the head. This description of eye seems to have disappeared very slowly, as one of our contemporary authors, Rognetta, mentions having seen an invalid who still wore one of these eyes (*ecblepharos*). "I admit," adds he, "that I prefer a hundred times a simple black bandage to such a clumsy placard." The figure

represented in the work of Ambrose Paré appears to offer us an example of this (*ecblepharos*).

One sees, in the same chapter of this author, the representation of a plate made of enamelled gold, of the color of the natural eye, intended to be placed under the eyelids (*hypoblepharos*); but whatever might be the skill of the painter, his pencil could not depict the fulness or curve of the cornea. Add to this that these plates must be immovable, on account of their having no connection with the subjacent ocular stump, and we may rest assured that these eyes were in themselves deformities.

If one reflects, besides, on the representation which is given us of these pieces, we may well be doubtful of their utility. The acuteness of the internal angle of the artificial eye cannot fail to wound the *caruncula lachrymalis*, and the similar disposition of the external angle must interfere with the maintenance of the piece in the orbital cavity, and allow it to slip from between the eyelids.

Later on they attempted to give these metallic plates the form of a shell, better adapted to the configuration of the cavity destined to receive it; but all these experiments, however ingenious they may have been, failed to produce any practical result. The gold plate, prepared to receive the layer of enamel, always gave these artificial eyes a considerable weight, so that these pieces soon caused inflammation of the tissues on which they rested.

At length, the first trial in making enamel eyes took place; but, for a long time these were only used for ornamenting the heads of dolls and marionnettes—afterwards, for animals intended for natural history collections.

The development of the manufacture of artificial eyes at last produced pure enamel shells, extremely light, and to which were given the exact form of the human eye—that is to say, they had a projecting cornea. This was a real and considerable progress which should enable prosthesis henceforth to answer to the requirements of practice, the rest being necessarily the result of experience—the work of time.

And now, the makers of artificial eyes have succeeded in imitating the transparent cornea, the anterior chamber, the radiating form of the iris, the pupil, the sclerotic, and the vessels of the conjunctiva, with such a degree of perfection that it is often difficult, not to say impossible, to distinguish the fictitious eye from the natural one.

If we add, with these improvements, the clever artists who devote themselves to this specialty, contrive, by ingenious sections at the edges of the shells, to adapt them to all the irregularities of the surface of the lost eye, so as to take advantage of the mobility of the stump in order to establish complete harmony between both eyes, we can imagine to what a degree of perfection the art may attain.

I have frequently witnessed the following occurrence:—When a patient, wearing an artificial eye, presents himself at the clinique of M. Sichel, this clever ophthalmologist requests one of the pupils who attends his class to make a diagnosis of the affection from which he suffers. After an attentive and minute examination of the eyes, the young student reports an immobility of the pupil of one eye, and, sometimes, a more or less increased density of the globe—never have I seen the existence of a prosthetic piece recognized—and great, inva-

riably, has been his surprise on being told that the eye, on the disease of which he had been discoursing, was an enamel one.

The various figures which we publish explain, by the numerous and diversified forms of the edges of the shells, how the application of an artificial eye no longer requires a previous operation; and the use of enamels, which resist for a greater length of time the dissolving action of the humors of the orbital cavity, each day lessens the great misfortune of losing an eye.

Thus, in the treatise of Hazard Mirault, published in 1818, we see that this artist recommended the artificial piece to be changed every six months at least, whilst M. Boissonneau, in the paper which he read at the Ophthalmological Congress of Brussels, mentions a period of double that duration:—"The polish of the artificial shell lasts," he says, "for more than a year; and at the end of that time they have merely lost their brilliancy, without ever becoming uneven on the surface."—*Dublin Quarterly Journal of Med. Science.*

VITAL STATISTICS OF THE AFRICAN RACE.—The following series of questions, which are particularly directed to the medical profession, have been issued by the Commission appointed to inquire into the condition of the colored population emancipated by the President's proclamation and by acts of Congress:—

"1. What is the number of the colored population of your town? 2. About how many pure blacks? 3. About how many mulattoes? 4. Does the colored population, if not recruited by immigration, increase or decrease? 5. Do mulattoes seem to you to have as much vital force to resist disease and destructive agencies as pure blacks, and as whites; and do they usually live as long? 6. To what diseases do mulattoes seem peculiarly liable? 7. Do mulatto families usually have as many children as white families? 8. Can you give instances within your own knowledge, of the number of children in one family born of, and reared to maturity by mulatto parents? 9. Are the colored people generally industrious and self-supporting, or not? 10. How is it in the second generations with regard to the number and health of offspring? 11. Through how many generations has any family of mulattoes been known to persist? 12. Do the mulattoes seek public charity in greater or less proportion than whites? 13. Do you consider them, upon the whole, as valuable members of the community, or not?"

NATURE OF THE GASES IN HYDRO-PNEUMOTHORAX.—M.M. Ch. Leconte and Demarquay have prepared a memoir in relation to the gases in hydro-pneumothorax in man. After having produced traumatic emphysema in animals in order to study the changes which the air undergoes under these new conditions, they have determined that the air found in emphysema in man undergoes modifications entirely analogous to those which have been observed in animals.

The air extracted from the cellular tissue of an old man, in whom emphysema had been occasioned by a fracture of the ribs, presented the following composition:—

Oxygen,	-	-	-	-	-	6
Carbonic acid,	-	-	-	-	-	5
Nitrogen,	-	-	-	-	-	89
						<hr/> 100

The same results have also been recently obtained in the case of a patient in the same condition, in which the air had undergone the same alteration. These facts illustrate in a striking manner:—

1st. The frequent complete harmlessness of extensive emphysemas, in consequence of the rapid absorption of nearly all the oxygen and of its replacement by a certain quantity of carbonic acid.

2d, and finally, the slowness of the absorption of the gases in emphysema, for we have demonstrated that of all the gases nitrogen, both in man and animals, most resists absorption.—*Journal de Chimie Médicale*.

ALTHOUGH the letter of Dr. Williams, published to-day, is dated at Utrecht, we are pleased to announce his return home from a visit of several months to the various medical schools of Europe. His letters to the JOURNAL have furnished instructive and interesting pictures of the study of ophthalmology abroad, and his return will be most welcome to his numerous friends and patients.

At the stated meeting of the Suffolk District Medical Society, held on Wednesday, the 16th inst., the names of the following gentlemen who have joined the Society since the annual meeting in April, were read:—Admitted by Censors, Dr. Alex. M. Wood; from other Societies, Dr. George B. Windship. Deceased since annual meeting, Drs. N. K. Gunn, John Stevens, David Roberts, James W. Stone, C. A. Davis.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, SEPTEMBER 12th, 1863.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	54	52	106
Ave. mortality of corresponding weeks for ten years, 1853—1863,	51.4	51.6	103.0
Average corrected to increased population	00	00	112.89
Death of persons above 90	0	1	1

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar. Fev.	Pneumon.	Variola.	Dysentery.	Typ. Fever.	Chol. Infan.
15	0	2	6	0	9	4	21

NOTICE.—It has again become necessary to notify subscribers and others that Mr. J. G. White, of Philadelphia, is not authorized to act as agent for this JOURNAL.

ERRATUM.—On page 124, of the last number of the JOURNAL, line twenty-third, for "time" read *him*.

MARRIED.—At Norwalk, Conn., J. W. McLean, M.D., to Miss Hattie L. Graman, both of Norwalk.

DEATHS IN BOSTON for the week ending Saturday noon, Sept. 12th, 106. Males, 54—Females, 52.—Accident, 1—asthma, 1—inflammation of the bowels, 1—bronchitis, 1—cholera infantum, 21—consumption, 15—convulsions, 5—debility, 1—diarrhoea, 7—diphtheria, 1—dropsy of the brain, 2—drowned, 1—dysentery, 9—scarlet fever, 2—typhoid fever, 4—gastrotritis, 1—disease of the heart, 3—strangulated hernia, 1—insanity, 1—disease of the kidneys, 1—congestion of the lungs, 1—inflammation of the lungs, 6—marasmus, 6—neuralgia of the stomach, 1—old age, 3—paralysis, 2—peritonitis, 1—premature birth, 1—scrofula, 1—suicide, 1—teething, 1—disease of the uterus, 1—unknown, 1—whooping cough, 1.

Under 5 years of age, 52—between 5 and 20 years, 8—between 20 and 40 years, 15—between 40 and 60 years, 16—above 60 years, 15. Born in the United States, 76—Ireland, 22—other places, 8.